Risk management functions and Central Bank Balance Sheets

Session 4: Risk Management Framework
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ON INVESTMENT MANAGEMENT
OF FOREIGN EXCHANGE RESERVES

Contents

Overview of the UK Reserves

- The Bank manages reserves for the UK Government Exchange Equalisation Account (EEA) equivalent to 3% of GDP. These are mainly (65%) invested in foreign exchange currency cash, bonds and notes with the remainder mainly in Gold and SDRs.
- A range of risk management approaches are required. The principal investment trade-off is between policy readiness, financial risk (credit and market risk), and investment return.

Chart 1.1: UK Government's Official Reserves

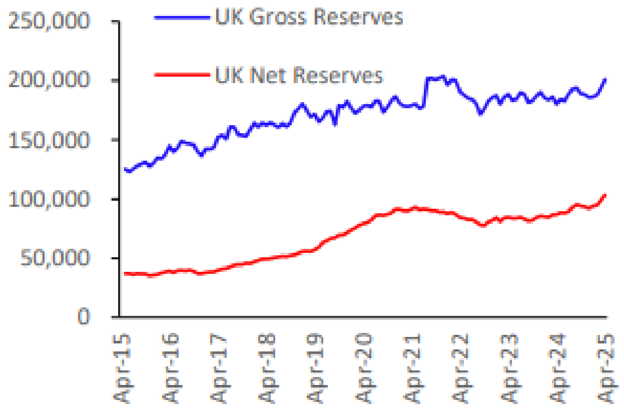
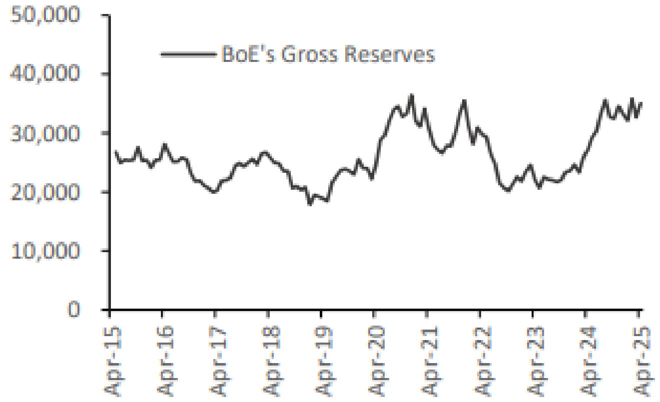
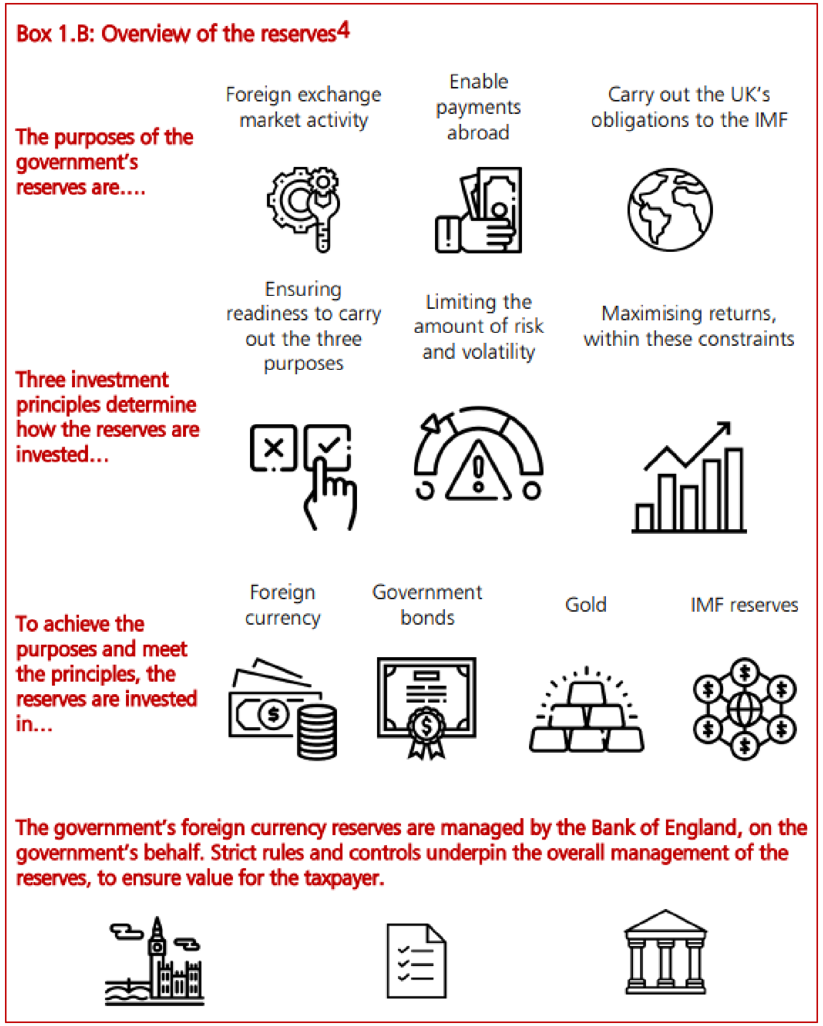
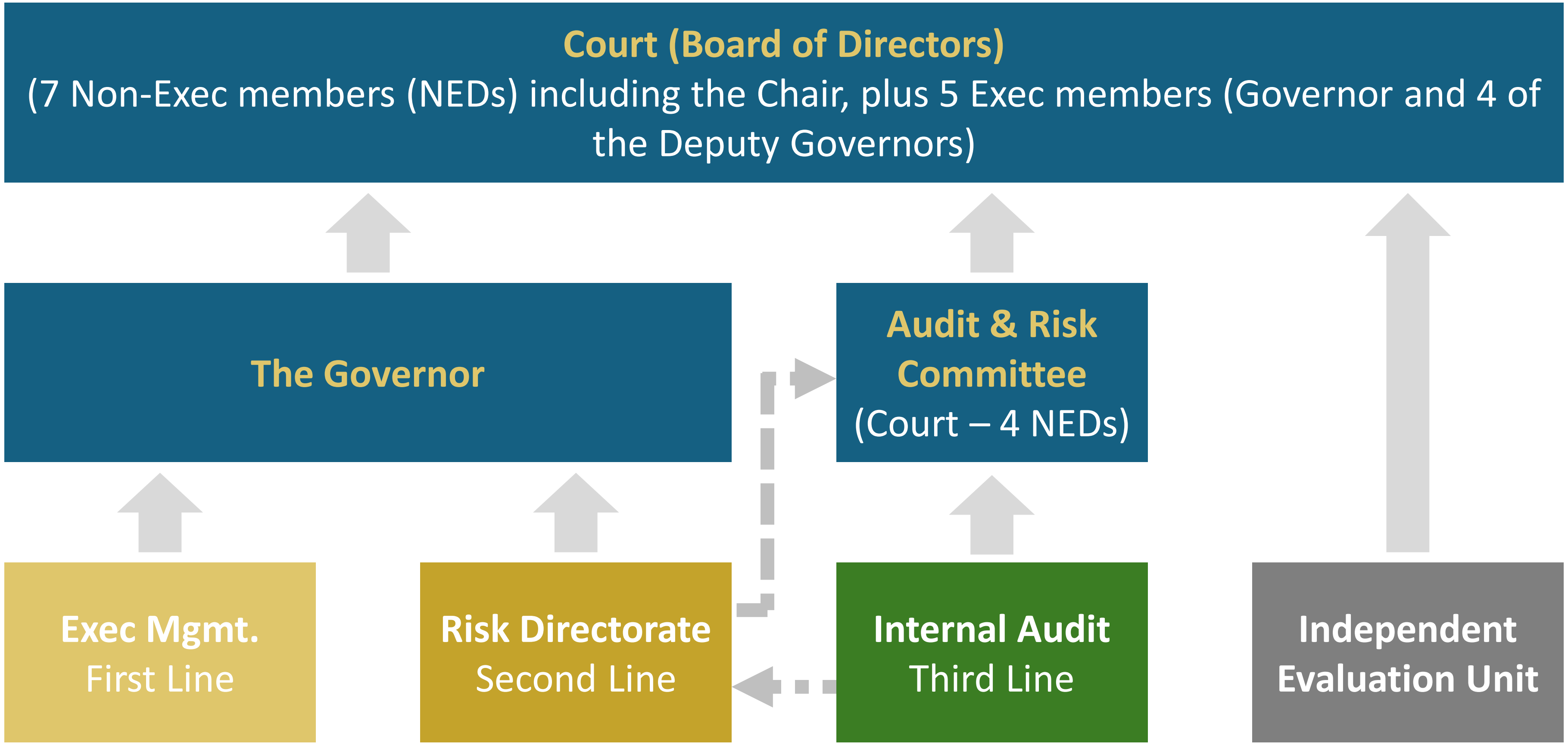


Chart 1.2: Bank of England's Official Holdings





‘Three Lines of Defence’ at the Bank



Three Lines of Defence

COURT

- Risk management strategy
- Risk Tolerance
- Delegates monitoring and oversight to the Audit & Risk Committee

FIRST LINE: BUSINESS AREA

- Owns and manages risks to functions and objectives
- Implements and monitors controls
- Adheres to Bank risk tolerance

SECOND LINE: RISK DIRECTORATE

- Defines and maintains Bank risk management framework
- Develops and deploys risk management tools for 1LoD
- Oversees and challenges 1LoD
- Provides consolidated risk reporting to the Exec & Court

THIRD LINE: INTERNAL AUDIT

- Provides assurance that the risk management framework is fit for purpose and that it is being implemented as intended

Risk Custodians

Subject matter experts for each Key Risk type in Bank's Risk Taxonomy

Risk Management in the First Line

The First Line of Defence:

- All transactions are executed by the reserves management teams in the **Foreign Exchange Division**.
- **Financial Risk Management Division** is responsible for financial risk analysis, risk methodologies, risk management information and reconciliations. Market risk is measured using backward-looking portfolio market risk measures, including value-at-risk and expected shortfall, as well as forward-looking scenario-based stress testing. Ongoing issuer credit and counterparty risk exposures are also monitored, relative to a credit risk limit framework.
- The Bank's **Middle Office** is responsible for running, developing and streamlining the operations and processes which underpin risk management including static data and instrument set up/pricing.
- Operational risk management and crisis and contingency planning are the responsibility of the **Markets & Banking Chief Operating Officer Division**.

Expectations of the first line

IDENTIFY

Inputs:
- Business Area Objectives
- Key functions
- Risk Taxonomy
- Incident data

ANALYSE

Considers:
- Causes
- Inherent risk
- Key controls
- Residual risk
- Impact types
- Key Risk Indicators
- Linkages / amplifiers

EVALUATE

In / out of risk tolerance?:
- Control effectiveness
- Residual risk
- HARM table

RESPOND

Path to Green:
- Needed for all out of tolerance risks.
- Resolve control gaps or improve key control effectiveness

REPORT

Governance:
- ED review
- Second-line challenge
- Quarterly reporting to risk committees
- Annual attestation

This is the desired end state. Business areas progress at different speeds with respect to reporting, integration of incident data, consistent application of HARM table, controls documentation and assessment.

Risk Management in the Second Line

Executive Director Risk

- Enterprise Risk and Resilience (16 people)
- Compliance (inc. Privacy) (14 people)
- Financial Risk and Resilience (20 people)

Internal Audit has a dotted line into the Risk Directorate

What is the Risk Function in a Central Bank for?

Previously: Ensure that the Bank manages its risks within tolerance to deliver its objectives and protect its reputation

Now: **Enable the Bank to take risk confidently by making sure it is managed within tolerances**

Setting risk tolerance

Operational: the Bank seeks to ensure that the crystallisation of operational risks does not impact the delivery of business-critical functions and gives priority to mitigating risks relating to high-availability systems supporting those functions, such as payment and settlement services, and banking services.

Legal: the Bank has no tolerance for a deliberate breach of a statutory, regulatory and/or other legal requirement by the Bank or its staff. Otherwise, the Bank takes a proportionate and robust approach to legal risk and places a strong emphasis on controls to ensure that legal risk is appropriately monitored and mitigated.

Conduct: the Bank expects the highest standard of conduct from its staff and leaders and, again, places strong emphasis on controls around financial crime.

Climate: the Bank seeks to ensure that it is resilient to the risks from climate change and supportive of the transition to a net-zero economy, including active management of climate risks consistent with a path towards its published targets.

Dynamic and Integrated risk culture

RISK DENIAL

- Group think
- Over-confidence
- Optimism bias
- Incomplete/selective information
- Limited Knowledge
- Rejection of facts and evidence
- Neglecting issues
- Tolerating issues
- Risk only relevant to others, not us!

RISK AVERSE

- Avoids discussions of risks
- Avoids responsibility for risks
- Avoids proactive action due to fear of failure
- No tracking or analysis of failures or successes
- Can't learn from mistakes; high repeat-failure rates
- Padded budgets, extended timelines, surprise overruns
- Assign blame, don't share risks
- Enterprise cannot take on important risks

RISK AWARE

- Actively consider risk inherent in the day-to-day
- Okay to talk about risk
- Okay to take risks
- Okay to fail (if managed appropriately)
- Success and failures tracked and analysed
- Continuous learning and improvement for key processes
- Realistic budgets and continuously monitored timelines
- Actively share risks and risk management
- Enterprise can take on bigger risks.

RISK SEEKING

- Voluntary risk taking
- Risk activity seen to have positive moral value
- Pessimistic bias
- Unsubstantiated perception of control
- Competitiveness
- Early adoption of new ideas
- High risk, high reward mindset

Why do stress testing?

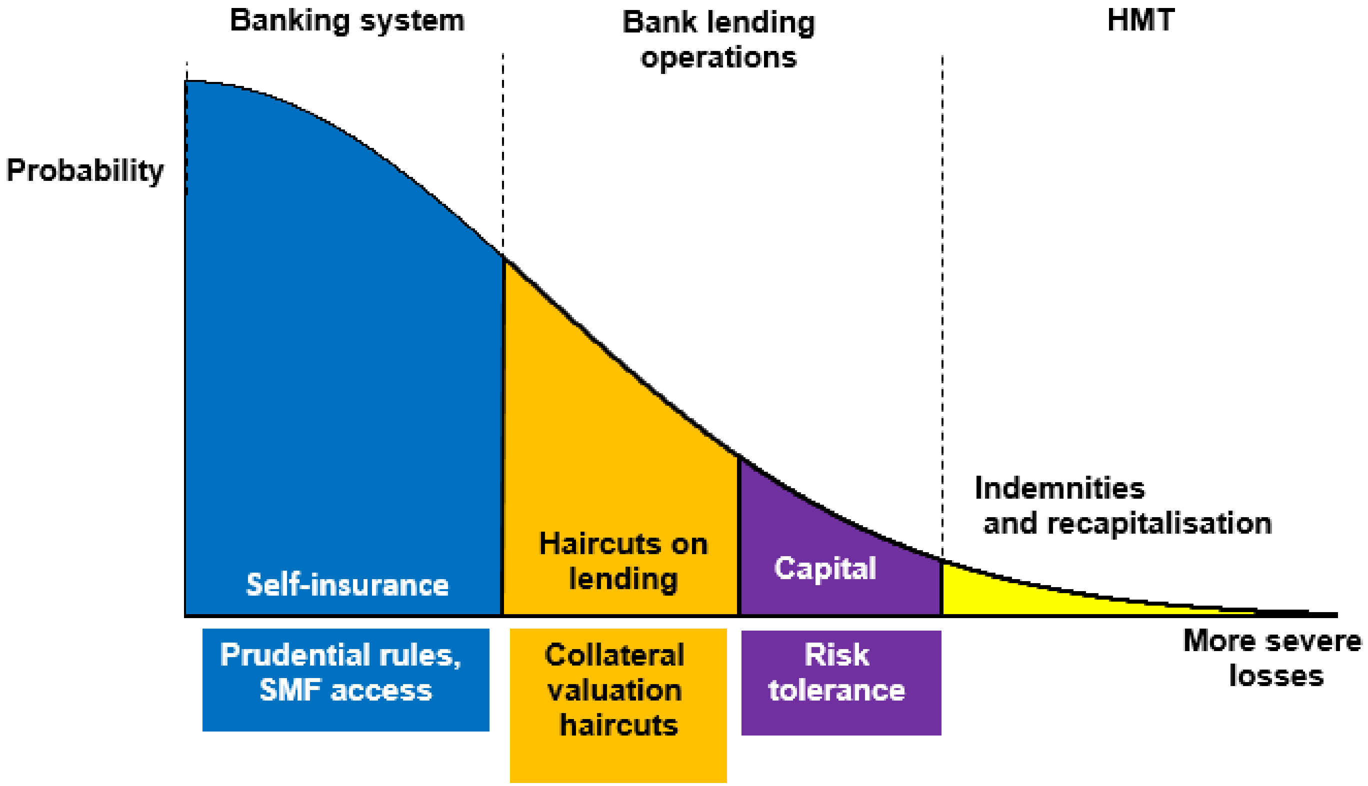
To assess the adequacy of financial resources

To articulate risk tolerance

To test readiness for a range of scenarios

To enable the Bank to take risk confidently

Ownership of risk



Where does our role start and stop?

- Firm's self-insurance
- Risk mitigants including haircuts
- Government / public funds

Bringing stress testing to life

What scenarios do we want to be able to tolerate, and how do we translate that into a balance sheet stress?

Stress scenarios
- What do we want to be able to withstand?
- Numerical or descriptive?

Balance sheet expansion
- Increase in BAU facility usage
- Activation of contingent facilities
- Firm behaviour

Counterparty default
- Assumptions about default behaviour & collateral management
- Large firms vs multiple small

- There are no facts about the future, only probabilities.
- How do we observe our tolerance for a fatal risk – one that would Bankrupt the organisation (reputationally, financially, operationally, culturally). Ensuring the probability and impact of such things are minimal is where lots of time is spent and continuous debate and refinement is important.
- Many of us have to self-insure Financial Stability risks, there is no one to risk share with except government...
- **Where to focus on the scale of tolerating to eliminating risks?**
- **How good is the understanding and communication of risks internally? Do you have a consistent approach?**

Using stress tests in risk management

What should a central bank stress testing framework allow us to do?

- Agree with Government the optimum balance sheet size and how to maintain it (eg income retention)
- Ask questions about central facilities and collateral in the context of a range of scenarios
- Provide the liquidity required by firms through a range of economic scenarios and idiosyncratic events
- Assess idiosyncratic shocks against risk tolerance & existing capital resources
- Communicate to stakeholders what balance sheet support is available and what events would require Government agreement / risk sharing
- Provide quantified answers to a series of "what if" questions, both for crystallising risks and for horizon scanning purposes
- Compare core "severe but plausible" stress scenarios, which define risk tolerance, against a range of potential events, to understand balance sheet resilience